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MONTHLY MICROCLIMATIC SUMMARY

JANUARY 1968

ENVIRONMENTAL DATA BASE FOR REGIONAL STUDIES IN THE HUMID TROPICS

USATECOM Project No. 9-4-0013-01

US ARMY
TROPIC TEST CENTER
Fort Clayton, Canal Zone



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ENVIRONMENTAL DATA BASE FOR REGIONAL STUDIES IN THE HUMID TROPICS

MONTHLY M. GROCLIMATIC SUMMARY

JANUARY 1968

Prepared by

Michael A. Fradel, Project Officer and Dr. Wilfried H. Portig, Meteorologist

USATECOM Project No. 9-4-0013-01

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Conducted by

US Army
Tropic Test Center
Fort Clayton, Canal Zone
with contractual services provided by
Weather Engineers of Panama Corp.

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MONTHLY MICROCLIMATIC SUMMARY

Introduction

Monthly microclimatic data summarized in this series of reports were collected by the US Army Tropic Test Center and the Weather Engineers of Panama Corporation under the project, Environmental Data Base for Regional Studies in the Hamid Tropics. The project is sponsored by the Advanced Research Projects Agency of the Department of Defense and by the Army Research Office, Office of the Chief of Research and Development. It is an investigation of microclimatic, air chemistry, vegetation, soils, microbiological, and macrofaunal conditions at selected sites in the principal tropical environments of the Panama Canal Zone and the Rio Hato Military Reservation. The objective of the project is to assemble quantitative environmental data for RDT&E purposes.

Sites. Data summarized in this report were collected at the Albrook Forest and Chiva Chiva sites. Figure 1 shows the site locations within the Isthmus of Panama. Geographic coordinates are shown below:

Albrook Forest	09°	01'11,	79 ⁰	33'W
Chiva Chiva	09 ⁰	01 'N	79 ⁰	35'W

The Chiva Chiva open site and the Albrook Forest site are paired for comparative study of environmental conditions in a tropical semideciduous forest and in a large clearing. Both are located in a region where the annual precipitation is approximately 80 inches and there is a pronounced dry season. The other satellite sites were located primarily for soil studies purposes. Albrook and Fort Kobbe have climatic regimes similar to the principal sites.

The Albrook and Chiva Chiva main sites are approximately four kilometers apart. Each has a 46 meter walk-up tower and an air-conditioned building to house the recording equipment and observers. Both sites are approximately 30 meters above sea level. The top of the forest canopy at the Albrook site is about 26.5 meters above the ground.

Instrumentation. A wide range of climatic elements are measured at the Albrook and Chiva Chiva sites. Types of observations and frequencies are shown on Figure 2. The towers at the Albrook and Chiva Chiva sites are similarly oriented. Sensing equipment is mounted at several levels on the towers to provide measurements through the vertical profile. Additional instruments are emplaced in the immediate vicinity on or near the ground. All instrument exposures are duplicated at each site. Figures 3, 4, and 5 show the instrument array at these sites.

Data Reduction and Storage. All data, as applicable, are recorded at or reduced to each full hour and transposed to punch cards. These punch cards, together with all raw data, are stored in the Tropic Test Center Technical Library Annex.

The relative humidity data contained in this report required some adjustment due to the difficult problems in maintaining hair hygrometers in the humid tropics. The hygrometers show saturation at a time when the psychrometer shows a relative humidity well below 100%. For this reason the hourly measurements made by means of a hair hygrometer have been modified on the basis of simultaneous psychrometer readings of other levels. Details will be given in the fourth Semiannual Report. It can be assumed that the means of relative humidity presented in this volume are very close to the true means.

Special Notice. The reduced amounts of instrumentation found in this volume reflect the phasing out of old observational techniques. New automatic data acquisition and recording systems have been installed and are expected to become operational on 1 March 1968.

Publication of these microclimatic summaries are expected to be resumed with the data collected during April 1968.

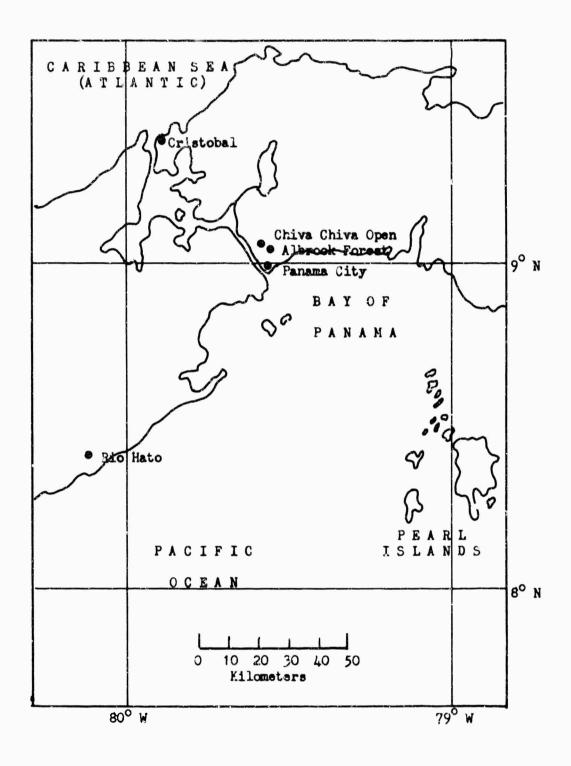


FIGURE 1. LOCATION MAP, ISTHMUS OF PANAMA

FIGURE 2. FREQUENCY OF OBSERVATIONS

	4.0 8.0 13.5 26.5 30.0 32.0 39.0 46.0 Frequency	» » »		Continuously	2 Once Daily	Continuously 4 Times Daily	Continuously
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	Sfc	ıιm	i	•	,	1 1	
	# Element	Temperature: Dry Bulb Wet Bulb Grass Minimum	Relative Humidity	Barometric Pressure	Evaporation	Recording Gege	Wind: Direction Speed

Albrook and Chiva Chiva
 Albrook only
 Chiva Chiva only

Instrument descriptions are contained in the Environmental Data Base semiannual reports.

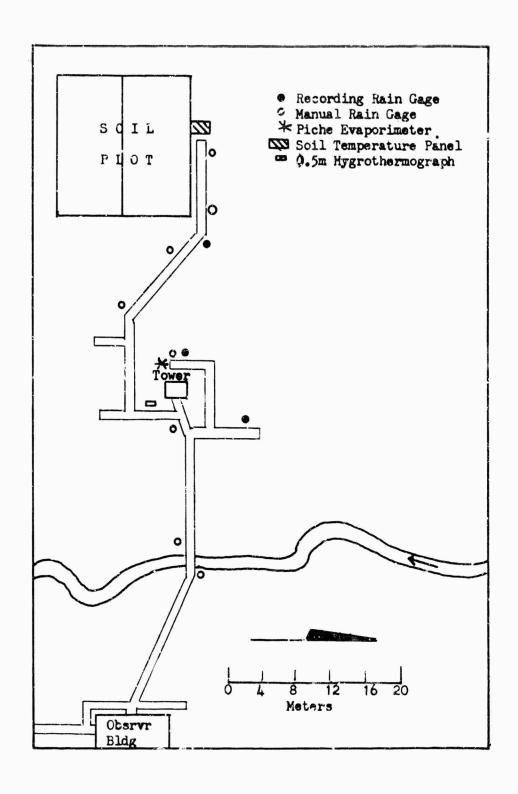


FIGURE 3. ALBROOK FOREST SITE, GENERALIZED PLOT

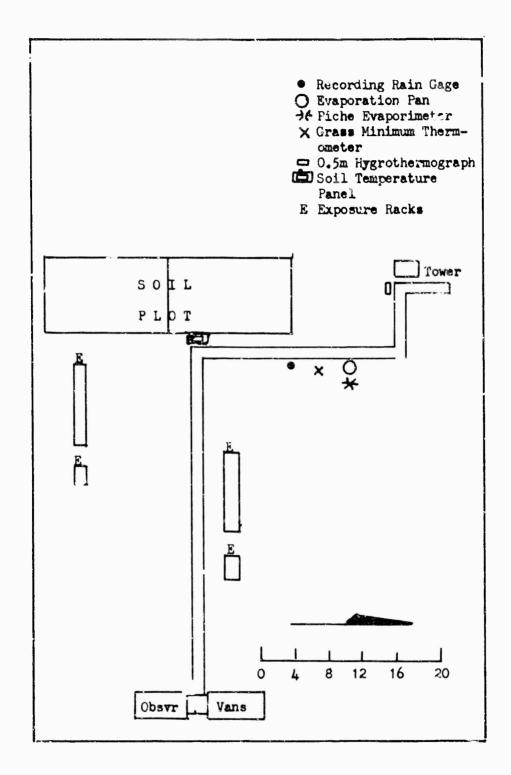


FIGURE 4. CHIVA CHIVA OPEN, GENERALIZED PLOT

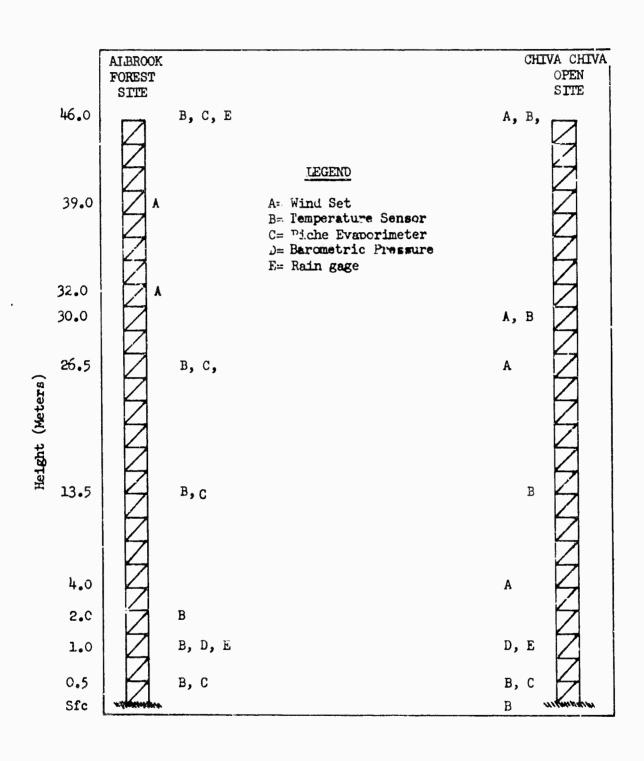


FIGURE 5. INSTRUMENT LOCATION ON TOWERS

SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA JANUARY 1968

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ary.	Medn Max.	88.0		88	87.			0.78	.86.	87.	
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	22	74.8		73	73.2			72.6	72.7	72.8	
	21	75.3		74.1	73.8			73.1.3	73.2	73.3	
 	20	76.2		75.2	74.7			73.9	74.1	74.2	
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ır	17	85.8 85.1 84.3 82.5 79.8 77.4 76.2 75.3 74.8 74.6 74.4	time	85.6 86.5 86.7 85.1 85.2 82.8 79.6 76.3 75.2 74.1 73.7 73.0 72.8	81.6 79.0 76.3 74.7 73.8 73.2 72.6 72.1	time	time	80.7 77.8 75.3 73.9 73.1 72.6 72.0 71.6 744	80.3 77.8 75.3 74.1 73.2 72.7 72.1 71.7	80.2 77.8 75.4 74.2 73.3 72.8 72.3 71.8	
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ature		85.1	ture a	85.1	84.2	ture	ture a	83.9 02.8	83.4 82.4	83.2	
Гетрег	14	85.8	cmrete	86.7	84.7	emper	ешрега	84.3	83.8	83.5	
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thly N	11	83.6 85.1	unme	84.5	80.5 82.1 83.7	trume	trume	81.4 83.0	80.8	80.6 82.4	. –
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	80	76.3	Inis leve	75.6	73.4	s leve	s leve	72.4	72.5	72.5	
	07	/3.3	_Tn <u>∓</u>	71.9	70.9	T	£	70.2	70.4	70.5	
	90	73.6		71.3	70.4			70.2	70.1	70.2	
	5.5	73.4		71.5	7.07			70.3	70.3	70.5	
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	0.1	74.2		72.8	71.8			2.Um 71.4 71.2 70.8 70.5 70.3 70.2 70.2 72.4	1.0 m 71.5 71.4 70.9 70.6 70.3 70.1 70.4 72.5	71.6	~~~
are	Level	46.0 m 74.2 74.0 73.7 73.5 73.4 73.6 /3.3 76.3	28.5m	26.5 m 72.8 72.6 72.0 71.7 71.5 71.3 71.9 75.6	3.5 m	8.0 m	4.0 m	2.08	i.0 m	0.5 m 71.6 71.4 71.0 70.7 70.5 70.2 70.5 72.5	
Exposure	Site	4	2		+-4	ores		oic (A	, <u> </u>		
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	740	740	740	730 64.7 78.3 94.0	
	4.0	3,9	3,5	2.0	
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	.6	.7 7.	.2 7:	.6 7	
posterior -	1 .74	0 74	8 74	5 72	
_	75.	3 75.	7 74.	5 73.	
	75.9	75.	75.	74.	
	77.3	77.3	77.2	76.1	
	79.5	79.5	79.7	79.0	
	82.5	32.6	83.2	34.0	
_	4.0	4.4	5.1	7.0	
-	78.9 81. 83.0 84.0 85.2 85.4 85.0 84.0 82.5 79.5 77.3 75.9 75.1 74.6 74.2 74.0	79.6 81.6 83.4 84.5 85.5 85.8 85.3 84.4 82.6 79.5 77.3 75.8 75.0 74.7 74.1 73.9	80.0 82.7 84.3 85.6 86.4 86.9 86.1 85.1 83.2 79.7 77.2 75.7 74.8 74.2 73.8 73.5	82.8 85.8 87.4 88.4 89.2 89.8 88.7 87.0 84.0 79.0 76.1 74.5 73.5 72.6 72.4 72.0	
	4.	80	98	8.	
	2 85	5 85	4 86	2 89	
	85.	85.	86.	89	
	84.0	84.5	85.6	88.4	
	83.0	83.4	84.3	87.4	
	31.	11.6	32.7	15.8	
	8.9	3.0.6	0.0	2.8	
No. of States	ന	2			
	7.	.5	9 78	4 77	
	8 73.	3 72.	3 71.	7 71.	
	72.	72.	71.	69	
	73.1	72.7	71.9	70.3	
	73.0	72.6	72.2	70.5	
-	73.2	72.8	72.4	70.8	
	3.4	3.0	2.5	1.0	
	46.0 m 73.7 73.4 73.2 73.0 73.1 72.8 73.4 75.	30.0 m 73.4 73.0 72.8 72.6 72.7 72.3 72.5 75.	3.5 m 72.9 72.5 72.4 72.2 71.9 71.3 71.9 75.9	0.5 m 71.2 71.0 70.8 70.5 70.3 69.7 71.4 77.9	
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	46.	30.0	13.5	0.5	
		(ətte	uədo	Chiva Chiva (C
-					

SUMMARY OF METEOROLOGICAL OBSERVATIONS

HOURLY DATA JANUARY 1968

										Mon	Monthly Ranges of Air Temperature by Hour (°F)	nges o	(°F)	Гетре	rature	by Ho:	Ħ							Monthly Summary*	ary*
- 31	01	0.2	03	04	0.5	90	07	08	60	10	11 12	12	13	13 14 15	15	16	17	17 18	19	20	21	22	23 24		
	4.7	4.8	4.0	5.0	5.3 5.0	5.0	4.0	6.0	5.9 6.5 5.3 3.5 6.0 5.0 5.8 6.3	6.5	5,3	3.5	6.0	5.0	5.8	6.3	0.9	6.0 3.9 2.3	2.3	2.9	2.9	3.23	3.2 3.9 3.2		
							Ē	s leve.	This level was not instrumented for air temperature at this time	not in	trume	ited fo	r air t	emper	ature a	it this	tlme					***			
26.5 m	5.2	5.8	9.9	8.3	7.1	7.1	10.2	4.6	9.7	6.4	3.8	3.7	3.9	3.7	5.8	7.9 7.3	7.3	6.8 3.7		3.3	2.5	2.4	5.0 4.2		
	7.0	9.9	7.2	3.1	8.7	0.8	8.0	0.6	5.5	6.9	6.8 4.9 4.1		5.5	8.8	9.9	٥.٥	0.9	6.0 6.0 6.0 6.5 5.8		5.4	5.0	5.1	5.5 6.5	Dillar Lity	
A 10 week				-0.			This 1		evel was not instrumented for air temperature at this time	not ing	เรานากลา	nted fo	r air t	етрет	ature 8	it this	time								
E 0.							Thi	s leve	This level was not instrumented for air temperature at this time	not ing	trume	ted fo	rair	emper	sture	it this	time						*-		
2.0 m	5.3	6,7	9	0.8	8,0	0.6	8.1	6.7	5.5	6.5	6.5 5.5 5.0 5.1	5.0		0.9	6.1	6.0 6.1 5.7 4.9	6.4	5.0	5.0	e. 3	5.0	5.0 5.0 4.3 5.0 4.9 5.3	5.3 5.9	g = 1 (s-	
l.: m	5.3	6.7	S. 9	7.2	7.9	A.2	æ	6.3	4.6	5.2	5.1	0.9	5.5	5.9 6.0	0.9	6.8	4.2	4.8 5.0		3.9	4.5	4.5 4.5 5.0	6.0 4.9		
	(7) (7)	6.1	6.0	7.6	8.0	7.9	8.2	0.9	4.5	5.1	5.0	5.5	5.5	7.0	0.9	5.1	4.2	4.5	4.9 3.9	3.9	ن. تن	4.1.	4.5 4.1 5.0 4.3	·	
٠.											-	-		-				-							

* No monthly summary	was computed for	the ranges.
*		

	4.2	4.	5.2	7.5	
	3.6	3.7	8.	7.0	
	3.3	5.9	4.2	6.7	
	4.1	4.0	4.0	6.7	
	2.2	2.4	2.5	0.9	
	3.0	2.9	2.3	4.3	
	5.0	5.0	4.7	3.2	more whom the more for
	6.5	9.9	6.2	5.1	
	6.2	7.3	1.7	6.7	
	7.0	8°0	7.9		
-	5.4	6.9	6.3	7.2 8.7	-
	4.5	4.5	. 8	8 · 6	
-	3.4	£. 9	0.9	7.2 9.8	
	4.9	4.6	8.8	5,8	
	3.9	4.3	5.1	0.9	
	6.5	6.5	. 8 9	1.7	
	А.0	8.2	7.5	7.0	
	6.8	7.9	9.3	10.0	
	5.0	5.9	7.5	10.6	
	3.6	~:	7.2	9.5	
	8° °	7. ₃	8.1	10.4	
	0.5	6.3	7.0	-:	
	4.2	5.3	7.3	8.5	
	5.4	5.7	6.6	9.6	
<u></u>	46.0 m	37.0 m	£ 5.	8 5.0	 The state of the s

SUMMARY OF METEOROLOGICAL OBSERVATIONS

HOURLY DATA JANUARY 1968

	Max.	97		94	9.2			001	100	001
Monthly Summary	Mean Max.	71		78	79			84	85 1	87 1
hly Su	Min.	42		52	47			44	20	55
Mont	No of 1	269		622	729			739	740	732
	24	78		06	06		y-	4.	94	9.4
	23	. 22		- 06	68			93	9.5	7 6
	22	92		80	88			95	95	92
	21	7.5		87	98			68	06	91
	20	71		82	83			87	88	88
	19	89		9/	77			82	84	88
	18	6.2		ű.	7.0			77	80	83
ur	17	26	s time	63	9	s time	s time	7.5	7.5	32
by Ho	16	23	at thi	09	62	at thi	at thi	99	70	74
mldity	15	52	midity	65	61	midity	midity	63	89	73
ive Hu	14	53	dve hu	65	09	ive hu	ave hu	63	99	7.5
Relati	13	53	r relat	09	61	r relat	r relat	63	67	72
io sue	12	5.5	nted fc	62	63	nted &	nted fic	99	7.0	74
Monthly Means of Relative Humidity by Hour (%)	11	59	was not instrumented for relative humidity at this time	64	29	was not instrumented for relative humidity at this	was not instrumented for relduve humidity at this time	12	7.5	78
Mont	10	62	not ins	89	7.1	not in	not in	7.8	81	84
	60	6.9	_	7.5	80	7	-	98	68	91
	9.0	78	Thus seve	98	93	This leve	This leve	9.8	9.8	96
	17	82	Ē	91	93	Ę	T	6	96	6
	90	82		91	93			26	97	86
	0.5	84		91	95			9.6	96	97
	04	83		91	92			9.6	96	97
	03	83		91	92			9.8	9.6	96
	0.3	82		16	92			86	94	96
	01	82		06	91			9.8	94	35
Exposure	Level	46.0 m	28.5 m	26.5 m	13.5 m	8.0 m	4.0 m	2.0 m	1.0 m	0.5 m
Ô	Site					(Fore				

3.0	86	86	100	
7.4	. 4	73	77	
46	42	4	42	
727	7.40	740	584	
83	83	84	99	
82	83	* 4	06	
ā	83	82	90	
ã	6 60	81	88	
78	7.8	78	84	
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95	\$ 5	53	55	
α v	58	55	58	
9	09	28	09	
99	99	63	64	
22	73	71	7.2	
6	87	81	82	
_ g	87	88	9.5	
8	87	88	4.	
8		88	93	
		87	93	
ν. ν.	36	87	92	
85 55	85	87	- 92	
48		98	92	
46.0 m	30.0 ш	13.5 m	0.5 m	
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SUMMARY OF METEOROLOGICAL OBSERVATIONS
HOURLY DATA
JANUARY 1968

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Monthly Summary*										
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 	24	14	-	- m	12			13		10
	23	11		11	13			10	10	11
	22	13		1	15			13	1.5	б
	21	15		15	16			14	15	10
	20	14		18	16			15	20	12
	1,5	23		19	18			18	23	16
	18	15	a .	18	22		_4:_	56	35	20
lour	17	21	al was not instrumented for relative humidity at this time	19	2.2	was not instrumented for relative humidity at this time	was not instrumented for relative humidity at this time	56	24	27
y by F	16	21	, at th	17	24	/ at th	, at th	36	33	43
umidit	15	2.5	appu	18	27	midit	midit	44	36	42
ive H	14 15	19	Hve h	13	25	tive h	tive h	25	30	88
Anonthly kanges of Relative Humidity by Hour (%)	13		r rela	12	20	r rela	r relai	27	56	34
o saɓu	12	18 18	nted fo	15	20	nted f	nted fo	37	37	36
hly ka	11	27	strume	14	20	strume	E E	28	82	33
Mont	10	23	not in	13	20	not in	not in	23	33	32
,	60	26	was	24	20	was	was	21	19	13
	80	25	This leve	13	ø	This leve	This level	10	10	9
	07	25	Ē	თ	10	T.	Th	თ	00	10
	90	22		13	11		* * *	14		6
	0.5	23		10	12		-	14	11	7.0
	04	24		00	12			15	10	13
	03	22		10	12			=	13	10
	0.5	17		æ	13			14	12	10
	01	20		б	10			6	7	- − ∞
iure	Level	46.0 m	28.5 m	26.5 ш	13.5 m	8.0 E	E 0 .4	2.0 m	1.0 m	0.5 m
Exposure	Site				IS 15:	(Fore	оок	id IA		

3	,				
mary					
y sum					
No monthly summary was computed for the ranges.					
• No n was					V
	20	18	18	15	
	19	19	16	17	
	- <u>«</u>	17	18	12	
	1.5	15	91	16	
	15	14	12	15	
	15	15 1	14	19	
	16 1	19 1	20 1	19 1	
				_	
	1 19	0 22	1 21	7 24	
	21	20	21	27	
	20	21	22	21	
	21	24	22	24	
	188	22	61	18	
	1.5	17	17	22	
	23	25	24	20	const. 1 de
	22	21	22	89	
	22	23	25	24	
	17	20	26	28	
	2.5	20	50	14	a
	15	16	17	13	
	15	17	17	13	· - —
	1.5	17	19	17	
	16	13	1.4	13	
	17	17	15 1	13	There are already as
	20 1				
		0 ш 21	.5 m 21	E 9	
	46.0 ш	30.0m	13	0.5 B	
		(€	ents t	(Opet	Chiva Chiva

SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

JANUARY 1968

5	Max.	77.1	83.0	.840	0.00	
Monthly Summary	Mean	71.8	72.7	.660 .763 .840	0.00 0.	
thly S	Min.	65.1	65.2	099.	0.00	
Mon	Ngg! Min. Mean Max.	743	733 65.2 72.7 83.0	736	000	
	24	0.4	8.0	787	000.00	
	23	0.5 7	1.0 7	792	0.00 0.00	
	22	0.9	1.3	791	00.00	
	21	.7 71.4 73.7 73.9 74.2 74.4 74.1 74.2 74.2 73.9 73.7 72.5 71.7 71.2 70.9 70.9 70.5 70.4 743 65.1 71.8 77.1	.9 71.8 74.1 74.8 75.3 75.9 76.4 76.3 76.5 75.8 75.0 73.6 72.4 71.8 71.5 71.3 71.0 70.8	.812 .802 .780 .754 .729 .708 .708 .710 .725 .743 .763 .782 .791 .792 .787	00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	
	20	1.2 7	1.8 7	763	0000	
	19	1.7 7	2.4 7	743	0.00 0.00	
	18	2.5 7	3.6	725	0.00	-
	17	3.7 7.	5.0 7	10	000000000000000000000000000000000000000	
/ Hour	16	9	8.8	80,	0000	
Monthly Means ² of other Elements by Hour	1.5	1.2 73	.5 75	.7	0.00	
II eme	14	.2 74	.3 76	29 .7	0.00	
other		.1 74	.4 76	54 .7	0.00 0.	
ns ² cf	2 13	47.4	9 76	80 .7	0.00 0.00	
y Mea	11 12	2 74.	3 75.	2 . 7.	0.00	
fonth	10 1	9 74.	8 75.	2 .80	0.00 0.00	
2	1	7 73.	1 74.	9 .81	00.00	
	60	4 73.	8 74.	.779 .798 .809	00.00	
	0.8	711.	71.	.79	00 00 00 00 00 00 00 00 00 00 00 00 00	
	0.	- 69	69		•••	
	90	69.5	69.8	.762	0.00 0.	
	0.5	69.5	69.8	.750	0.00 0.00 0.00 0.00	
	0.4	69.6	6.69	.745	0.00	
	03	63.9	70.2	.750	0.00	
	0.2	70.3 70.2 69.9 69.6 69.5 69.5	70.7 70.5 70.2 69.9 69.8 69.8	.776 .763 .750 .745 .750 .762	0.00 0.00 c.00 0.00 0.00 0.00 0.00 0.00	
	10	70.3	70.7	.776	0.00	
Exposure	Codel	WB (2.0 m)	WB (0.5m)	85	75. 76.	
å	Site		(81	ests;	no1) Aooid[A	

86.5	.950	0.00	
61.5 72.3 86.5	.745 .863	0.00 0.00 0.00	
61.5		00.00	
684	739	0	
	.885	00.0	
70.2	068.	0.00	
70.5	. 892	00.00	
70.9	.884	00.00	
71.2	. 865	00.00	
71.4	.845	00.00	
72.1	.825	00.00	
74.0	.810	00.0	
74.9	. B06	00'0	
75.7	. 811	00.00	
76.2	. 826	00.0	
76.1	.855	00.00	
69.7 73.8 75.7 76.0 76.1 76.4 76.1 76.2 75.7 74.9 74.0 72.1 71.4 71.2 70.9 70.5 70.2 70.6	.882 .899 .913 .314 .903 .882 .855 .826 .811 .806 .810 .825 .845 .865 .884 .892 .890 .888	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	
76.1	. 903	00.0	
76.0	.314	0.00	
75.7	.913	0.00	
73.8	. 899	0.00	
69.7	. 882	00.00	
68.6	. 862	0.00	
0.69	.847	0.00 0.00 0.00 0.00 0.00	
69.1	. 8.42	0.00	
69.2	. 846	00.00	
69.7 69.4 69.2 69.1 69.0 68.6	. 858	0.00	
.69	.873	00.00	
WB (0.5 m)	85	FS	

W8 - Wet bulb temperature (OF)
BP - Barometric pressure (in. of Hg minus 29.0)

Precipitation totals are substituted for the mean in the monthly summary. 2 Monthly means of precipitation are computed for precipitation days.

PS - Precipitation at 1.0 m. in open area (in.) Pl - Precipitation at 46.0 m. above canopy (in.)

P2 - Precipitation under full canopy (in.) P4 - Precipitation under open canopy (in.)

SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

JANUARY 1968

ary.					
um m					
Monthly Summary*					
Σ.					
	24	4.0	4.2	.070	00.00
	23	4.2	4.2	080	0.00
	22	4.2	3.9	560	0000
	21		3,3	100	0000
	20	4.0 3.5	7	105	0000
	19	4.2	3.8	060	000
	18	5.2	8.8	090 . 180 . 105 . 100 . 090 . 105 . 100 . 095	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
5	17	0.9	0.9	195	000
by Hou	16	0.0	0.6	180	000
ents]	15	7.1	8.5	. 060	000
r Elen	14	s. o	7.4	120	000
of othe	13	4.7	7.5	110	0000
Monthly Ranges ² of other Elements by Hour	12		5.7	.110 .110 .120	000
ıly Rar	=	4.2 6.0	5.0		000
Mont	10	.1	6.3	.076 .060 .095	000
	60	3.3	2.9).	0000
	08	0.9	0.9	.075	0000
	07 (8.0	8.5	.130	0.00 0.00 0.00 0.00 0.00
	90	6.3	9.9	.080	0000
	35 0	5.4	6.2 6	0.080.	00000
	04 0	5.4	5.1 6		00.00
		5.2.5	4.7	.080 .080	0000
	2 03	5.0		0. 02	0.00 0.
	1 02	4.0	4.7 5.1	020. 02	00.00
	9	_		.070	0.00
Exposure	Sod Sod	WB (2.0 m)	WB (0.5 m	89	222
Exp	Site		(93)	8 188	A:brook (For

No monthly summary was computed for the ranges.

5.1 5.9 7.1 7.0 7.1 8.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 7.0 5.4 6.5 4.8 4.7 7.0 5.0 6.0 0.00 0.00 0.00 0.00 0.00 0.00	5.1 5.9 7.1 7.0 7.1 4.3 7.5 4.5 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.5 5.7 6.0 5.9 6.2 5.0 4.5 5.6 4.5 5.7 4.8 4.7 6.5 4.8 4.7 6.5 685 685 685 685 685 685 685 685 685 68	₩8 (0.5 π.)	BP	S	
5.9 7.1 7.0 7.1 8.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 6.5 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8	5.9 7.1 7.0 7.1 4.3 7.5 4.5 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.5 5.7 4.0 4.3 5.7 5.4 6.5 4.8 4.7 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8 6.8	5.1	.065	00.0	
7.1 7.0 7.1 8.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7 7.9 5.0 6.5 5.0 6.5 5.0 6.5 5.0 6.5 5.0 6.2 5.0 5.0 6.2 5.0 5.0 6.2 5.0 5.0 6.2 5.0 5.0 6.2 5.0 5.0 5.0 6.2 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	7.1 7.0 7.1 4.3 7.5 4.5 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 7. 3.095 085 090 085 090 080 075 070 080 100 135 100 0.95 105 130 125 095 090 085 070 075 065 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Million at 1 of the later	.085	0.00	and a second region for the second region of the second region region region region of the second region re
5 .085 .090 .085 .090 .080 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065	7.0 7.1 8.3 7.5 4.5 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.3 5.7 5.4 6.5 4.8 4.7 5.085 .090 .085 .090 .080 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 6.000 0.00 0.00 0.00 0.00 0.00 0.00 0.		.095	0.00	
7.1 8.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 (390, 3090, 308	7.1 9.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.3 5.7 5.4 6.5 4.8 4.7 7. 390 0.85 0.90 0.075 0.070 0.00 0.00 0.00 0.00 0.00 0	7.0	.085	00.00	
8.3 7.5 4.5, 4.0, 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.3 7.5 4.5, 4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.f 4.0 4.3 5.7 5.4 6.5 4.8 4.7 .085 .090 .080 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	7.1	.090	00.00	
7.5 4.5, 4.0, 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7 6.90 0.00 0.00 0.00 0.00 0.00 0.00 0.00	7.5 4.5, 4.0, 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.f 4.0 4.3 5.7 5.4 6.5 4.8 4.7 .090 .080 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.			00.00	and to a common or the same of
4.5 4.0, 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7	4.5, 4.0, 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.f 4.0 4.3 5.7 5.4 6.5 4.8 4.7 .080 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00 0.00 0.0	7.5	060.	0.00	
4.0, 4.5, 5.7, 5.0 5.9 6.2, 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7 .075 .070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	4.0 4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.3 5.7 5.4 6.5 4.8 4.7 675 0.70 0.80 0.00 0.00 0.00 0.00 0.00 0.00	.5	.080	00.00	
4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7 6.70 0.00 0.00 0.00 0.07 0.08 6.2 6.3 6.8 4.8 4.7 6.70 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0	4.5 5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.3 5.7 5.4 6.5 4.8 4.7 -070 .080 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	.0	.075	0.00	
5.7 5.0 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 680 .100 .095 .130 .125 .095 .095 .070 .075 .065 5.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	5.7 5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 680 .100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 5.00 0.00 0.00 0.00 0.00 0.00 0.0	4.5	. 070.	0.00	
5.0 5.9 6.2 5.0 4.5 5.f 4.0 4.3 5.7 5.4 6.5 4.8 4.7 10c .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 1.00 0.00 0.00 0.00 0.00 6.00 6.00 0.00 0.00 0.00 0.00 0.00 0.00	5.0 5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 100 .135 .100 .095 .105 .130 .125 .095 .090 .085 .070 .075 .065 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	5.7	080	0.00.0	
5.9 6.2 5.0 4.5 5.0 4.3 5.7 5.4 6.5 4.8 4.7 135 100 0.095 130 0.00 0.00 0.00 0.00 0.00 0.00 0.00	5.9 6.2 5.0 4.5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 135 .100 .095 .105 .130 .125 .095 .090 .085 .670 .075 .065 .00 0.00 0.00 0.00 0.00 0.00 0.00	5.0	100	0 00.	
00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	100 1095 105	5.9	135 .1	.00 00.	
00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	00 0.00 0.00 6.00 0.00 0.00 0.00 0.00 0	.2.	00 00	00	Market Williams - 12-per 42-per
.5 5.f 4.0 4.3 5.7 5.4 6.5 4.8 4.7 55 130 125 095 090 085 070 075 065 50 0.00 6.00 0.00 0.00 0.00 0.00 0.00	5 5.6 4.0 4.3 5.7 5.4 6.5 4.8 4.7 55 .130 .125 .095 .090 .085 .070 .075 .065 50 0.00 6.00 0.00 0.00 0.00 0.00 0.00 0.	o. 4	9510	00 0.0	
0 -125 -095 -090 -085 -6.5 4.8 4.7 0 -125 -095 -090 -085 -6.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	.5.	5 .13	0.0	W. Carlotte and Ca
4.3 5.7 5.4 6.5 4.8 4.7 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00	4.3 5.7 5.4 6.5 4.8 4.7 .095 .090 .085 .070 .075 .065 0.00 0.00 0.00 0.00 0.00	- -	0 .125	0 6.00	
5.7 5.4 6.5 4.8 4.7 .090 .085 .070 .075 .065 0.00 0.0C 0.30 0.00 0.00	5.7 5.4 6.5 4.8 4.7 0.00 0.085 0.70 0.05 0.05 0.00	4.3	.095	00.00	
5.4 6.5 4.8 4.7 .085 .070 .075 .065 0.00 0.30 0.00 0.00	5.4 6.5 4.8 4.7 .085 .070 .075 .065 0.0C 0.30 0.00 0.00	5.7	060.	00.00	
6.5 4.8 4.7 .070 .075 .065 0.30 0.00 0.00	6.5 4.8 4.7 .070 .075 .065 0.30 0.00 0.00	5.4	.085	0.00	AND
075 .065 .000 0.00	4.8 4.7 075 .065 .00 0.00	6.5	070	0, 30 0	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 90 00 00 00 00 00 00 00 00 00 00 00 00	8.	075 . (.00	
		1.7	96.5	.00	·····

W8 - Wet bulb temperaturs (°F) BP - Barometric pressure (in. of Fig minus 29.0)

 $^{\rm 2}\,{\rm Monthly}$ rarges of precipitation are computed for pracipitation days.

PS - Precipitation at 1.0 m. in open area (in.) P1 - Precipitation at 46.0 m. above canopy (in.)

P2 - Precipitation under full canopy (in.) P4 - Precipitation under open canopy (in.)

SUMMARY OF METEOROLOGICAL OBSERVATIONS HOURLY DATA

JANUARY 1968

	<u>}</u>	Max	17	51	
	пшша	Mean Max.	9	2	
	Month ly Summary	Min.	0	0	
	Mor	No of Min.	474	725	
		24	4	4	
		23	4.	4	
		22	4	4	
		2.1	5	4	
		20	S	4	
		19	S	4	
		18	7	S	
	L	17	80	9	
	у Нош	16	10	7	
	Monthly Means of Wind Speed by Hour (miles/hr.)	15	10	7	
1968	Wind S 'hr.)	14	01	80	
JANUARY 1968	ns of Wind (miles/hr.)	13	1.0	80	
4	Mea:	12	σ		
	fonth	Ξ	თ	7	
	~	10	0 0	9	
		60	7	u)	
		90	4	(r)	
		62	4	60	
		90	4	С	
		0.5	S	<u>.</u>	
		04	~	60	
		03		4	
		0.5	4	4	
		10	4	4,	
	sure	Level	39.0 ш	32.Um	
	Exposure	Site			(etta festo) AbordíA
,					

,	
20	18
2	2
0	0
742	742
9	v
9	v
ي و	v
· c	v
9	ω
7	v
~	_
60	α
б	10
6	
10	12
10	11
01	12
10	12
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v	u)
4	ю
₹*	м
S	4
	4
5	4
5	4
9	4
26.5 m	. 0 . E
	Cldva Chiva (Open site)

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SUMMARY OF METEOROLOGICAL OBSERVATIONS

HOURLY DATA JANUARY 1968

mmary*		-			* No monthly summary wzs computed for the renges.		
Monthly Summary*					No monthly summwes computed for the renges.		
Ž					• No Wes		
	24	10	œ 			12	10
	23	7	2		- mage	12	
	22	&	2				2
	21	10	80			10	σ
	20	13	7			4	on
	13	œ	7			12	φ
	18	Ø	S			19	4
	17	01	80			20	12
y Hou	16	12	6			20	4
q peed	15	12	80		-	16	12
'Ind Sp	4	=	11			16	0
ges of Wind	13	12	12			15	σ
Range (n	12	10	6			16	01
Monthly Ranges of Wind Speed by Hour (miles/hr.)	=	6	11		-	16	7
Ž	10	d)	10		-	15	01
	60	13	6			4	01
	90	9	6		-	13	o
	02	60	80		-		Φ
	90	on .	7		-	10	v
	0.5	6 0	6				K
į	04	12	10			10	0
21	03	တ	7			10	
	02 (ω 	c o		_	10	σ
	010	10	60				o
<u> </u>	-				-		6 0 E
Exposure	Level	39.0 m	32.0 m		_	26.5 m	
Ž	Site			Albrook (Forest site)	15		Chiva Chiva (Open site)

ALBROOK (Forest site) JANUARY 1968

ī

								elativ	e Frequ	nencie	s* of \	Relative Frequencies* of Wind Directions by Hour at 39.0 m.	recto	ins by	Hour	at 39.	ë.							Γ
H		L	L		L	L		-	-			(%)												
) ja	ō	05	6	ষ	6	8	07	80	8	10	11	1.2	13	14	15	16	17	81	61	20	7:	"	1,	7 7
Z											4.7		4.7						T		1	:	3	6.7
NNE									L										T	1	- "	+	1	1
2							-	1	\downarrow			Î										_		
1								4.7		5.0	4.7	9.6	4.7	13,3	4.5	6		4		<u> </u>	+-	l	+	T
ENE	4.7							9.6	5.0	15.0	4.7	4.7	9,6			13 61	-	2	1	\dagger	+	\dagger	Ť	T
E										0		!		Ť	T	0.07	3.1	1	4.7		+	+	1	
FKE	1 1						_	_		20.0		4.7	4.7		4.5	4.5	5.1		4.7		4.7		4.7	-
100	,									5.0	4.7	4.7		9.1	9,1	***	9.1	- 6			\vdash	+	+	T
SE									5.0	5.0	4.7	14.3		4.5	13.6	2 6	10	;	T	\dagger	+	+	\dagger	T
SSE			4.7						u	L	:	1				5	1.6	1	1	.	1	-		
9									2	2.0	14.3	9.6		4.5		4.5		4.5		9.6		-		_
,									15.0		4.7		4.7	-	4.5	A.	- 0			-		-	+	Ī
SSW									v				1				;	t		+	4.7	+	+	
S.W				,					2		9.6	1	9.6	+	1	1	9.1	4.5	4.7	9.6		-		
			T	7.		Ī			10.0	5.0	4.7	4.7	4.7	13.6		4.5		5	_	-	_	-	-	Τ:
WSW	4.7			4.7	4.7			4.7	10.0	5.0	9,6	16.	23 p		2			;	\dagger	7.	+	+	+	4.7
A	4.7	14.3	9.6	4.7	4.7	9.6	9.6	4.7			4	1	,		2	3.1	+-	7.1	4.7	4.7	4.7	+	+	
WNW	23.8	14.3	23.8	42.9	1 6	787	0	_				;	+		13.6	\dagger	9.1	13,6	19.1	9.6	14,3 14,3		4.7 14	14.3
AN	42.0	_	_		1		13.1	23.8	0.01	2.0	4.7	4.7	4.7	13.6	13.6	9.1	4.5	13.6	14.3	14.3	4.7 14	14.3 23	α	38 2
	,		25.5	33.4	62.1	42.9	62.1	42.9	25.0	20.0	14.3	14.3	19.1	13.6	13.6	22.71	31.8	22.7	287	7 00				:
NZZ Z	14.3	23.8	9.6	4.7	4.7	14.3	9.6	9.6	10,0	5.0	4.7	4.7	- y	13 61	0		-		,	001/00	0	7	57.2 33	33.4
CALM			-	4.7	4.7	4.7						+	2		7.01	4° S	\dagger	9.1	14.3 1	19.1 14.	.3 14.	3	9,6	9.6
· North		-			-					1	-	-							_	-		_		

• Note: Due to rounding, percentage totals do not equal 100%. This data represents only the last 20 days of the month. The instrument was installed as of 10 January, 1330 hours.

CHIVA CHIVA (Open site) JANUARY 1968

							Rel	ative 1	Relative Frequencies* of Wind Directions by hour at 46.0 m. ($\%$)	ncies*	of Wi	nd Dir (%)	ection	s by h	our at	46.0	ė							
Dir.	10	112	03	8	05	8	07	80	8	10	=	12	13	41	2	191	17	82	19	20	21	22	23	24
z		5.6	5.6										5.0	5.8				5.0	5.0					
NNE							5.6		11.1	6.3		15.0	10.0	11.8	11.8	12.5	5.0	10.0		5.0				
ZE							5.6			6.3	18.6	5.0	5.0	5.8		12.5	10.0		5.0			Ò		
ENE																6.2	5.0							
ш											6.3										5.0			
ESE							5.6		5.6															
SE										6.3		5.0			11.8			10.0	5.0					
SCE								5.6				5.0												
S																								
AN SS																	5.0	10.0		5.0				
SW										6.3					5.8				5.0			5.2		
wsw							5.6	5.6						5.8	11.8	12.5		5.0	5.0	5.0				
₽	5.5								5.6					11.8	5.8		5.0	5.0		5.0				
WNW	16.6	27.8	61.0	5.6	5.6		22.2		5.6		12,4			11.8	5.8	12.5	10.01	5.0	10.01	5.0		10.5	16.€	16.6
₽ Z	27.8	66.5	33.4	33.	6	35.8	16,6	27.8	22.1	24.9	12.4	30.0	35.0	17.7	17.7		20.0	15.0	15.0	15.9	30.0	26.3	33.3	27.7
BZZ	48.9			61.0	4.4	4.4 61.0	38.8	61.0	49.5	49.9	50.1	40.0	45.0	29.5	29.5	43.9	46.0	35.0	50.0	50.0 60.0 65.0 58.0 49.9	65.0	S8° ກ		55,5
CALM																								

• Note: Due to rounding, percentage totals do not equal 100%. This data represents only the last 20 days of the month. The instrument was installed as of 10 january, 1200 hours.

CHIVA CHIVA (Open site) JANUARY 1968

		e()					Rel	ative	Relative Frequencies* of Wind Directions by Hour at 30.0 in.	ncies*	w jo	ind Dir	ection	s by F	four at	30.0	E.							
									Ì			9												
Dit.	01	02	03	64	\$0	90	07	03	86	01	11	12	2	14	15	16	17	18	19	20	2.1	22	73	24
z	9.7	19.4	29.0	9.7	16.1	16.1	16.1	12.9		12.9	3.2	6.4	6.4	12.9	6.4	3.2	6.4	ত.	3.2	9.7	9.7		9.7 19.1	13.4
NNE	22.6	12.9	6.4	16.1	19.4	19.4	9.7	9.7	16.1	9.7	3.2	6.4	22.6	6.4	12.9	16.1	12.9	19.4	19.4	3.7	19.4		25.8 23.4	23.4
N.	3.2	6.4	3.2	9.7			6.4	9.7	19.4	3.2	16.1 19.4		16.1	12.9	12.9	12.9	22.6	12,9 16,1	16.1	19,4	5.4	3.2	3,3	
ENE									;	3.2	6.4	6.4	3.2	9.7	6.4	6.4	3.2	3.2						
ដ្ឋា				3.2			3.2	3		9.7	9.7	4	3.2	3.2	6.4	1					3.2			
ESE													3.2			3.2	-							
SE			3.2						3,2		3.2													
SSE										3.2														
S		3.2				6.4		9.7	3.2															
SSW						3.2	3.2														į			
SW						3.2	3.2													i		3.2		
wsw						3.2																		
W	3.2		3.2	3.2	9.7																			3.3
WNW	25.8	32.2	22.6	25.8	25.8	16.1	19.4	29.0 12.9	12.9	6.4	9.7	9.7	6.4	9.7	16.1		12.9	6.4	16.1	19.4	19,4	22.6	23.4	26.7
₽Z	29.0	19.4	32.2	25.8	25, 8	29.0	7	2,6 25,8 41.9		22.6	32.2	32.2	35.5	22.6	16.1	41.9	29.0	35,5	41.9	41.9 38.7 38.7		35.5	30.0	30.0
MNN	6.4	3.2		3.2		3.2	12.9		3.2	25.8	16,1	12.9	3.2	19,4	22.6	16.1	12.9	12.9	3.2	3.2	3.2		9 9	3,3
CALM		3.2		3,2	3.2		3.2			3.2				3.2				3.2					c)	
ב ב ב																			-					

• Note: Due to rounding, percentage totals do not equal 100%.

CHIVA CHIVA (Open site) JANUARY 1968

							RA	Relative Fremiencies + of Wind Directions by Hour at 4 0 m	Fremie	notes.	M. Jo	יוני סיי	action.	J Vid at	Tour at	4								
									, , ,		.	(%)		ξα 2:			:							
Dic	10	03	03	C4	05	8	07	08	8	10	11	12	13	14	15	16	17	18	19	70	21	22	23	24
z			5.6	11.1	5.6		5.6		5.6		12.4	5.6						5.0	5.0 10.0	5.0	15.0	10.5	6.5	5.5
NNE	5.6			11.1	5.6	5.6	16.6		5.6		18.6	20.0	10.0	17.7	5,8	12.5	20.0				5.0	5.2	5.5	
NE							5,6			6.3		5.0	5.0			6.2			10.0					
ENE	5.6				5.6	5.6				6.3	6.3									10.0				5,5
E				5.6			5.6			12.4					5.8				5.0				·	
ESE			5.6									5.0		5.8			5.0	10.0		5.0				
SE		5.6		5.6				5.6	5.6	6.3							5.0						5.5	
SSE								16.6					5.0			6.2								
S																								
SSW															ა.ა		5.0							
5W														5.8	5.8	6.2		5.0			5.0			5.5
wsw							11.1		5.6			5.0	5.0	5.8		6.2		10.0					5,5	
W	5.6							5.6		12,4				5.8			10.0	5.0		10.0				
WNW	22,1	5.6	16.6		5.6	16.6						5.0		5.8	11.8	5.2		5.0	10.0		5.0	5.2	5.5	5,5
ΣŒ	11.1	44.4	33.4	22.1	49.9	27.8	11.1	38.8	33.4	24.9	31.2	15.0	25.0	11.8	29.5	6.2	10.0	35.0	25,0	20.0	20.0	35.9	27.7	55.5
MNN	44.4	38.8	27.8	44.4	27.8	44.4		33.4	44.4	31.2	31.2	40.0	50.0	41.0 35.4		50.2	45.0	25.0	40.0	50.0	50,0	42.2.38.	38.8	16.6
CALM	5.6	5.6	11.1				2.6																5.5	5.5

• Nore: Dar to rounding, percentage totals do not equal 100%. This data represents only the last 20 days of the month. The instrument was installed as of 10 January, 1200 hours.

SUMMARY OF NON HOURLY DATA

JANUARY 1968

Ī	Summary of Ele	ments with Non-hourly I	requencies o	of Observation		
Site			Number of Obs.	Minimum Value		Maximum Value
site)	Evaporation ³ (in. at 4 levels)	Piche (46.0 m) Piche (26.5 m) Piche (13.5 m) Picho (0.5 m)	26 28 29 26	0.512 0.012 0.043 0.012	16.783* 10.923* 4.855* 2.708*	0.982 0.640 0.281 0.189
Albrook (Forest site)	Precipitation from Raingauge Network ² (in. at 1.0 meters)	Gauge # 1 13 auge # 2 Gauge # 3 Gauge # 4 Gauge # 5 Gauge # 6 Gauge # 7 Gauge # 8	0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00* 0.00* 0.00* 0.00* 0.00* 0.00* 0.00*	0.00 0.00 0.00 0.00 0.00 0.00 0.00
	Evaporation ³ (in. at 0.5 meters)	Piche Pan	3] 24	0.317 0.041	15.792* 5.501*	0.683 0.362
Chiva Chiva (Open site)	Minimum Grass temp ³ (°F at grass tips)	None	26	39.8	49.3	66.0

^{2 -} Six hourly observations3 - Daily observations

* Total Values

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Fort Clayton, Canal Zone		26. GROUP	
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19. ABSTRACT			
\			
This report contains detailed microclimati	ic data for	January 196	8 from specific sites
in the Panama Canal Zone and vicinity. The			
summarized for hourly and/or daily bserve			
Elements listed are: temperature, pressu	re, precipit	ation, wind	d speed and direction,
relative humidity, and evaporation.			
d.			

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